



Dive into this wealth of information about the Earth's  
past, present and future climate

Search



2) Search for «sea level»

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website



We found 2 results

0 on ADS

0 on EWDS

Sort by Relevance

Filter by

My favourites datasets

Product type

Climate projections

Reanalysis

Provider

Spatial coverage

Temporal coverage

Future

Past

Variable domain

Atmosphere (surface)

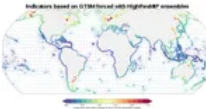
Atmosphere (upper air)

Land (biosphere)

Land (hydrology)

Ocean (biology)

Ocean (physics)



### Global sea level change indicators from 1950 to 2050 derived from reanalysis and high resolution CMIP6 climate projections

This dataset provides statistical indicators of tides, storm surges and sea level that can be used to characterize global sea level in present-day conditions and also to assess changes under climate change. The indicators calculated include extreme-value indicators (e.g. return periods including con...

Climate projections Reanalysis Copernicus C3S Global Future Past Ocean (physics)



### Global sea level change time series from 1950 to 2050 derived from reanalysis and high resolution CMIP6 climate projections

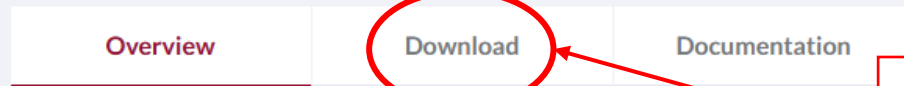
This dataset provides time series of global sea level related variables including tides, storm surges and sea level rise from 1950 to 2050 based on hydrodynamic modelling. The dataset provides a basis for studies, for instance, aiming to evaluate sea level variability, coastal flooding, coastal eros...

Climate projections Reanalysis Copernicus C3S Global Future Past Ocean (physics)

3) Filter the search results



## ★ Global sea level change time series from 1950 to 2050 derived from reanalysis and high resolution CMIP6 climate projections



4) Open the download tab

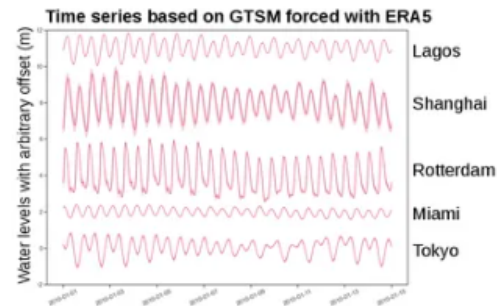
### Info

17 Apr 2025

A new version has been added requiring a change to the download form. Users are advised that CDS API requests will need to be updated to accommodate this change. Please see the known issues under the Documentation tab for more information regarding the version update.

This dataset provides time series of global sea level related variables including tides, storm surges and sea level rise from 1950 to 2050 based on hydrodynamic modelling. The dataset provides a basis for studies, for instance, aiming to evaluate sea level variability, coastal flooding, coastal erosion, and accessibility of ports.

The time series are computed using the Deltares Global Tide and Surge Model (GTSM) version 3.0, a hydrodynamic model that dynamically simulates water levels at 10-minute intervals and capable of using input forcing from reanalysis and climate models. The dataset is based on climate forcing from ERA5 global reanalysis and 5 Global Climate Models (GCMs) of the high resolution Coupled Model Intercomparison Project Phase 6 (CMIP6) global climate projection dataset from the High Resolution Model Intercomparison Project (HighResMIP) multi-model ensemble. By making use of the HighResMIP multi-model ensemble, it is possible to quantify the uncertainties associated with the input climate forcing in this dataset.



### References

[Citation and attribution](#)

DOI: [10.24381/cds.a6d42d60](https://doi.org/10.24381/cds.a6d42d60)

### Licence

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### Publication date

2022-07-06


### Update date

2025-08-14

### Standard metadata

[STAC](#) 

[CSW](#) 

Related datasets 

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**Info**  
17 Apr 2025  
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**Variable** [Select all](#) [Clear all](#) [Clear all fields](#)

Mean sea level  Storm surge residual  Tidal elevation  Total water level

**Experiment** [Clear all](#)

Future  Historical  Reanalysis

**Model**

CMCC-CM2-VHR4  EC-Earth3P-HR  GFDL-CM4C192-SST  
 HadGEM3-GC31-HM  HadGEM3-GC31-HM-SST

**Temporal aggregation** [Select all](#)

**References**  
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[STAC](#) [CSW](#)

**Related data**

6) Indicate the reference period and the temporal resolution

**Temporal aggregation** [Select all](#) [Clear all](#)

10 min  Daily maximum  Hourly  Annual

**Year** [Select all](#) [Clear all](#)

<input type="checkbox"/> 1950	<input type="checkbox"/> 1951	<input type="checkbox"/> 1952	<input type="checkbox"/> 1953	<input type="checkbox"/> 1954	<input type="checkbox"/> 1955
<input type="checkbox"/> 1956	<input type="checkbox"/> 1957	<input type="checkbox"/> 1958	<input type="checkbox"/> 1959	<input type="checkbox"/> 1960	<input type="checkbox"/> 1961
<input type="checkbox"/> 1962	<input type="checkbox"/> 1963	<input type="checkbox"/> 1964	<input type="checkbox"/> 1965	<input type="checkbox"/> 1966	<input type="checkbox"/> 1967
<input type="checkbox"/> 1968	<input type="checkbox"/> 1969	<input type="checkbox"/> 1970	<input type="checkbox"/> 1971	<input type="checkbox"/> 1972	<input type="checkbox"/> 1973
<input type="checkbox"/> 1974	<input type="checkbox"/> 1975	<input type="checkbox"/> 1976	<input type="checkbox"/> 1977	<input type="checkbox"/> 1978	<input type="checkbox"/> 1979
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<input type="checkbox"/> 2034	<input type="checkbox"/> 2035	<input type="checkbox"/> 2036	<input type="checkbox"/> 2037	<input type="checkbox"/> 2038	<input type="checkbox"/> 2039
<input type="checkbox"/> 2040	<input type="checkbox"/> 2041	<input type="checkbox"/> 2042	<input type="checkbox"/> 2043	<input type="checkbox"/> 2044	<input type="checkbox"/> 2045
<input type="checkbox"/> 2046	<input type="checkbox"/> 2047	<input type="checkbox"/> 2048	<input type="checkbox"/> 2049	<input type="checkbox"/> 2050	

**Month** [Clear all](#)

January  February  March  April  May  June  
 July  August  September  October  November  December

5) Select the variable of interest

**Request validation**

Request size

Variable

Experiment

Model

Temporal aggregation

Year

Month

Version

Reanalysis experiment

Select all Clear all

v2 (deprecated)

v3

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✓ Accepted

Corresponding API request

</> Show API request code

Submit form Clear all fields

7) Select the most updated version of the data

8) Submit the data request

Note: The data will be downloaded for the entire globe

8) Wait for acceptance and press download

Your requests

All	Accepted	Running	Failed	
1 of 1 request				
Product	Submission	End	Status	Actions
Global sea level change time series from 1950 to 2050 derived from reanalysis and high resolution CMIP6 climate projections > <a href="#">Details</a>	2026-04-13 10:23:41am		● Accepted	> <a href="#">Check status</a>

Successful

Delete selected

Status	Actions
● Successful 00:00:31	Download 407.22 MB